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ABSTRACT

In an investigation of the impact of prevocational training on employment status, two groups (N=49 and 59) of educable retarded former pupils in Oregon work experience programs were interviewed. Results indicated that the Ss' unemployment rates (20 percent and 46 percent were comparable to an adjusted rate for 16- to 21-year-old members of the general population. The finding that graduates of work experience programs were more successful in finding employment was corroborated by a post-hoc evaluation of national workstudy projects in which "fully served" clients were involved. Data confirmed that high school work experience programs enhanced employment potential for mentally retarded young adults. (CL)

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WORKING PAPER NO. 61

THE IMPACT OF WORK/STUDY PROGRAMS ON EMPLOYMENT OF THE MENTALLY RETARDED: SOME FINDINGS FROM TWO SOURCES

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The Impact of Work/Study Programs on Employment of the Mentally Retarded: Some Findings from Two Fources

Andrew S. Halpern

There has been a steadily increasing interest, over the past 15 years, in the development of high school work experience programs for the educable mentally retarded, and a widespread interest in the effectiveness of these programs has emerged. The underlying rationale of these work experience programs has been to provide retarded high school pupils with the kinds of experiences necessary for a successful transition from the school environment to adult life in the community. One of the most important concerns of the program has been to structure prevocational experiences in such a way that the likelihood of adult vocational success is enhanced. The primary purpose of this paper is to examine some data that pertain to the impact of work experience programs upon the vocational success of educable retarded young adults.

Farber (1968) has argued that the mentally retarded, as well as other frequently overlapping disadvantaged groups, belong to America's socio-economic "surplus population." He uses the term "surplus" in an organizational sense, meaning that there are more people than slots in the "machinery of social organization," and that the values of organizations take precedence over the needs of workers. Given this definition of a surplus population, we find many individuals in contemporary American society in addition to the mentally retarded who qualify for membership: the infirm, the illiterate, the erotionally disturbed, the poverty stricken, and, in general, those "who have no integral role in the social organization of the society." Farber argues that mental

retardation in itself is usually not sufficient grounds for membership and that most retardates would be part of the surplus population on some other basis whether or not they were labeled as retarded. In this sense, Farber argues, the label is often used as a justification rather than an explanation of the failure of these individuals to make a satisfactory adjustment in our society.

The secondary purpose of this paper is to compare employment success of the mentally retarded with one other component of the surplus population in order to explore possible differences in achievement among subsets of this population. The comparison group selected was non-whites, primarily because of the accessibility of employment information about this group.

The data being presented come primarily from two studies that have been conducted by the Rehabilitation Research and Training Center in Mental Retardation at the University of Oregon. The first study is a follow-up survey of high school terminators from work experience programs in Oregon. The second study is a post-hoc evaluation of 43 research and demonstration projects that were federally funded in the area of work/study programs for the mentally retarded.

Design of the Survey

In collaboration with the Oregon Board of Education and the Oregon Division of Vocational Rehabilitation, 14 school districts were selected from 10 counties in Oregon to provide a sample of terminators from work experience programs for the educable retarded. The former pupils from these 14 districts represented approximately 30 per cent of the designated

population of work experience terminators in Oregon. The 14 districts were chosen to represent the geopolitical regions of Oregon, excluding the Portland area. Portland was excluded because other researchers were already involved in similar surveys in that area.

Two independent samples were interviewed during the summers of 1969 and 1970, each of them one year out of school. In addition, the 1969 sample was reinterviewed in 1970, thereby constituting a panel. All interviews were conducted in person, with information being collected on demographic, social, and vocational variables.

Of the 67 designated subjects in Sample I, 49 were located and interviewed during the summer of 1969. Of the 79 designated subjects in Sample II, 59 were located and interviewed during the summer of 1970. The panel consisted of 38 members from Sample I who were relocated and reinterviewed during the summer of 1970. A careful analysis of the designated and actual samples with respect to known demographic variables suggests that the effects of attrition were not severe, so that the two actual samples and the panel may be properly regarded as basically equivalent groups. A complete account of these procedures can be found in a report by Spence, Savage, and Romo (1970).

Design of the Post-Hoc Evaluation

In an attempt to demonstrate an effective interagency program for meeting the prevocational needs of mentally retarded young people, forty-three co-operative work/study projects were funded by the Federal Government during the past fifteen years. These projects were from three to five years in duration and were operated jointly with several

agencies participating in program administration and implementation. Forty-one of these projects were funded under the Research and Demonstration Division of the Department of Social and Rehabilitation Services. One project was funded by the National Institute of Mental Health and another by the United States Office of Education.

The final reports of these projects were analyzed and information was recorded on 82 variables: 80 independent or input variables and two outcome variables. The variables provided information in the following areas: stated objectives; client, project, and community demographic variables; evaluation and training procedures utilized; kinds of personnel involved; and reported outcomes. Since the project reports, unfortunately, were not always thorough, it was impossible to obtain information from each report on all 82 variables. In general, about two-thirds of the projects provided usable information on any given variable. A complete report of these procedures is in progress and will be available soon.

Some General Employment Statistics

In order to estimate the effectiveness of work experience programs in helping young retarded adults to secure employment, it is necessary to consider general employment statistics as a point for comparison. Figures are available for comparison with both the follow-up survey results and the findings of the post-hoc evaluation.

Since the follow-up survey was conducted in Oregon, Table 1 has been prepared in order to display the employment picture of the 10 counties which contained the 14 school districts utilized in the study.

For the general population in these counties, the average umemployment rate was 6.0% in June 1969, and 7.9% in June 1970.

TABLE 1

UNEMPLOYMENT IN JUNE 1969 AND JUNE 1970
ALL AGES AND BOTH SEXES, AS ESTIMATED BY 10 OSES* REPORTING UNITS
WHICH ENCOMPASS THE 14 SCHOOL DISTRICTS OF THIS REPORT

County(ies)	June, 1969 Labor force	Un-employed	Rate	June, 1970 Labor force	Un-employed	Rate
Marion-Polk	82,200	4,000	4.9	81,200	6,200	7.6
Yamhill	16,430	940	5.7	19,710	2,010	10.2
Linn	32,500	1,570	4.8	34,270	2,840	8.3
Benton	24,800	1,480	6.0	25,300	1,530	6.0
Lane	94,400	5,900	6.2	96,550	7,950	8.2
Coos	23,340	1,570	5.6	24,140	2,330	9.7
Curry	5,120	250	4.9	5,140	370	7.2
Klamath	20,630	1,110	5.4	21,030	1,420	6.8
Umatilla	22,260	1,240	5.6	21,000	1,370	6.5
Malheur (plus two in Idaho)	20,060	2,550	12.7	19,720	1,630	8.3
	341,740	20,610	6.0	348,060	27,650	7.9

*Oregon State Employment Service estimates the numbers and rates in the general labor force, such as shown in the Table, from numbers and rates among insured workers. The methods employed are generally accepted as reliable.

These general statistics, however, do not in themselves provide a good point of comparison against which to measure the employment success of mentally retarded young adults. Two "correction factors" are needed in order to provide a more appropriate benchmark: a correction for age, and a correction for comparison with other handicapped segments of the population. The 16- to 21-year-old segment of the general population is the most appropriate reference point for comparison with the young

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retarded adults surveyed in Oregon. Although no precise figures were available, a generally accepted estimate is that this younger segment o of the population will be unemployed at two to three times the rate of the population in general. Of the many possible segments of the general population that might be labeled economically handicapped, fairly reliable estimates are available for non-whites. On the average, non-whites tend to be unemployed at twice the rate of their white counterparts. Utilizing these two correction factors conservatively, the unemployment figures provided in Table 1 should be multiplied by four in order to provide an appropriate standard against which to compare the results of the Oregon survey. This yields a figure of 24% unemployment for June 1969, and 31.6% unemployment for June 1970.

A different set of statistics are needed to provide a point of comparison for the results of the post-hoc evaluation. Since a majority of the projects evaluated were completed between 1965 and 1968, national employment statistics were gathered for these years and are presented in Table 2.

TABLE 2

EMPLOYMENT STATISTICS FOR THE GENERAL POPULATION OF WHITE AND NON-WHITE 16-21 YEAR OLDS FROM 1965 THOUGH 1968*

Year	White	Non-White
1965	91.3%	80.6%
1966	92.3%	79.7%
1967	91.7%	80.9%
1968	91.8%	82.5%

*Employment and Earnings, U.S. Dept. of Labor, Vol. 13, #7, p. 27, Vol. 14, #7, pp. 36-37, and Vol. 15, #7, pp. 30-31.

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The "correct" information from Table 1 and the information from Table 2 will be used as points of comparison against which to measure the employment success of retarded young adults in the two studies being reported. These tables show that approximately 76% and 68% of the comparison groups were employed for the two years of the Oregon survey, and that 80% of the comparison group for the post-hoc evaluation were employed.

Employment Results for Retarded Young Adults

The occupational status of the two samples from the Oregon survey are shown in Table 3. For 1968 terminators, the unemployment rate of 20% compares favorably with the 24% rate that has been estimated for its comparison group. The 46% unemployment rate for 1969 terminators, however, greatly exceeds the estimated 31.6% rate for its comparison group. It appears from these results that an increased level of general unemployment has an especially harsh impact on vocational opportunities for the mentally retarded.

The information presented in Table 3 pertains to employment status at single points in time, June 30, 1969 and June 30, 1970. Since it is conceivable that a longitudinal measure of employment success might have provided different results, an "employment index" which provided a measure of each subject's work history over a 12 month period was constructed from the survey data. This index was defined in the following manner:

$$\text{Employment Index} = \frac{A + B/2}{C}, \text{ where}$$

A = Total months of full-time employment over a 12 month period

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B = Total months of part-time employment over a 12 month period

C = Total months in the labor market over a 12 month period

The 12 month period used in calculating an Employment Index was either July 1, 1968 through June 30, 1969 or July 1, 1969 through June 30, 1970, whichever was appropriate. The time female respondents spent as housewives was subtracted from the total months in the labor market. Also subtracted were months ill or injured and months in additional training.

TABLE 3

OCCUPATIONAL STATUS OF 1968 AND 1969 TERMINATORS IN THE OREGON SURVEY

Status	1968* Number	1968* Per Cent	1969# Number	1969# Per Cent
Employed	28	57	17	29
Unemployed	10	20	27	46
Housewives	5	10	2	3
School or training	3	6	8	14
Military	3	6	5	8
Totals	49	99	59	100

*Data pertain to June 30, 1969
#Data pertain to June 30, 1970

Table 4 shows the distribution of Employment Index scores for the two groups of high-school terminators. The scores for each group represent their first 12 month period out of school. It is apparent that

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the trend indicated in the cross-sectional data of Table 3 is retained in the longitudinal data of Table 4.

TABLE 4

EMPLOYMENT INDEX SCORES OF 1968 AND 1969 TERMINATORS FOR THEIR FIRST YEAR IN THE LABOR MARKET

Employment Index	1968 Number	1968 Per Cent	1969 Number	1969 Per Cent
High Score (0.50 to 1.00)	31	66%	24	45%
Low Score (0.00 to 0.49)	16	33%	29	55%
Total	47*	100%	53*	100%

*Two of the 1968 respondents and 6 of the 1969 respondents were not in the labor market during their first year out of school.

Although the data presented thus far suggest that the retarded young adults surveyed in Oregon did secure employment within the bounds of reasonable expectations, the question still remains as to whether or not participation in a high school work experience program had any positive influence on this outcome. In order to examine this question scientifically it would have been necessary to randomly assign retarded adolescents to experimental (program provided) and control (program denied) groups prior to surveying their status as young adults. Since such experimental control would have been impossible on ethical grounds, the closest substitute procedure is to separate the group of respondents on a post-hoc basis into those who graduated and those who dropped out

of school. The graduates can then be constructed as representing the full impact of the program in contrast to the drop-outs, who, at best, received only a partial complement of services.

Table 5 shows the relationship between the Employment Index and the type of high school termination. Of both 1968 and 1969 terminators, graduates were more successful than drop-outs in securing employment. Although the possibility of sample bias prevents an unambiguous interpretation of these results, they are at least in a direction that supports the hypothesis that a work experience program is beneficial.

TABLE 5

EMPLOYMENT INDEX SCORES FOR 1968 AND 1969 SUBJECTS BY TYPE OF SCHOOL TERMINATION, DURING THEIR FIRST YEAR IN THE LABOR MARKET

Employment	1968 Terminators				1969 Terminators*			
	Grad		Drop		Grad		Drop	
	N	Per Cent	N	Per Cent	N	Per Cent	N	Per Cent
High Score (0.50 to 1.00)	25	71%	6	50%	19	51%	4	31%
Low Score (0.00 to 0.49)	10	29%	6	50%	18	49%	9	69%
Total	35	100%	12	100%	37	100%	13	100%

*Three respondents in this sample terminated their high school program in Oregon by transfering and therefore could not be classified as either graduates or drop-outs.

Results from the Post-Hoc Evaluation

In order to compare the employment success of pupil-clients from 43 work/study programs throughout the United States, using final project

reports as the sole source of information, it was necessary to examine carefully and reorganize some of the data and information that were provided in these reports. The following operational definitions were devised for this purpose.

Component	Operational Definition
Partially Served	Subject was accepted into the program and received some services.
Fully Served	Subject graduated from or completed a school program, or subject completed a DVR plan as specified for him.
Active	Subject was still in the program at the time of project termination, either in classes or still receiving DVR services. Therefore, no outcome conclusion could be drawn.
Unknown	Subjects about whom no outcome information was available.
Employed	Subject working in a competitive position either part- or full-time for wages.

Two outcome variables, constructed from the above components, were defined in the following manner:

$$\text{Percent Employed (I)} = \frac{\text{Number Employed}}{\text{Number Partially Served minus Number Active minus Number Unknown}}$$

$$\text{Percent Employed (II)} = \frac{\text{Number Employed}}{\text{Number Fully Served minus Number Unknown}}$$

The correction factors (Number Active and Number Unknown) in the denominators of each proportion were subtracted in order to permit

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comparability of results among projects. "Active" subjects were removed from the proportions since their employment status could not yet be determined. Subjects whose employment status was unknown were also removed from the proportions. After these two corrections were applied, the meaning of each proportion could be properly construed as a ratio of subjects employed to subjects in the labor market at the time of project termination.

The difference between the two outcome variables is a function of the amount of service received. The partially served group, therefore, can be contrasted with the fully served group in an effort to estimate the impact of the work/study programs, much in the same way that graduates and drop-outs were contrasted in the Oregon survey. The employment results for the work/study projects are presented in Table 6.

TABLE 6

RANGES AND MEDIAN SCORES FOR THE TWO OUTCOME CRITERIA

	Range	Median	Number of Projects
Percent Employed-Partially Served	14-92%	52%	30
Percent Employed-Fully Served	31-100%	75%	29

It is clear from this table that fully served clients were more successful in securing employment than partially served clients. This finding is consistent with the results of the Oregon survey. Moreover, a comparison of Table 6 with Table 2 shows that the median value for

fully served pupil-clients (75% employed) is quite similar to the employment statistics for non-white 16- to 21-year-olds (around 80%). No such similarity exists with the median value for partially served pupil-clients (52%).

Discussion

The data presented above provide sound support to Farber's contention that the mentally retarded form a component of America's socio-economic surplus population. The question of degree of overlap with other components of the surplus population, however, appears to be a more complex issue. One such component, non-whites, are also known to be severely disadvantaged economically in American society. The non-whites represented in general employment statistics, however, may or may not have received vocational training and placement services, so that their most appropriate comparison group is the partially served pupil-clients from the work/study projects. This comparison suggests that the mentally retarded are a substantially more handicapped component of the surplus population than are non-whites in general. It is likely that other components of this population would also show varying levels of handicap.

Results from both the survey and the post-hoc evaluation suggest that a full complement of services within a work experience program will greatly enhance the retarded young adult's likelihood of achieving employment. With such services, the retarded seem capable of achieving results that are comparable to those of non-whites in general, but well

below the level of the white population in general. It seems reasonable to speculate that this level of achievement is approaching a zenith for the retarded, whereas the potential for non-whites has only begun to be tapped.

The data from the Oregon survey show a general economic decline between 1968 and 1969, with a parallel decline in employment for the retarded, suggesting that employment opportunities for the retarded are partially dependent upon the condition of the labor market in general. An extensive examination of other data from both the Oregon survey and the post-hoc evaluation suggests the following hypotheses about the relationships between general economic conditions and employment opportunities for the retarded:

1. When the level of community unemployment is high, it will be very difficult for mentally retarded persons who are new in the labor market to find jobs.
2. When community economic conditions deteriorate, mentally retarded workers are not necessarily in jeopardy of losing their jobs.
3. Mentally retarded persons who are assisted by well structured vocational training programs have a good chance of finding jobs, regardless of the level of general community unemployment.

The justification of these hypotheses is presented in another paper by this author (Halpern, 1972).

In summary, data from the above studies support the contention that work experience programs in high school have been helpful in assisting mentally retarded young adults to find employment. Their level of success can be quite high when the quality and quantity of services provided have been high. Under such circumstances, the impact of adverse economic conditions can be greatly decreased.

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